

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2668	((342/70) or (342/71) or (342/72) or (342/76) or (342/79) or (342/104) or (342/117) or (342/174) or (342/175)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/04/14 10:57
L2	1397	1 and @ad<="20020222"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 10:57
S1	1785257	auto or automotive or vehicular or (motor adj vehicle) or car or traffic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 10:52
S2	83502	radar	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:25
S3	15114	S1 and S2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:26
S4	106030	multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or multilobe or ((plurality or plural or multiple) near6 (beam or lobe))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:28
S5	996	S3 and S4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:28
S6	690833	lens	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:28

S7	282433	S5 and S6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:28
S8	343	S5 and S6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:29
S9	1321722	oblique or obliquely or slant or aslant or downward	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 09:04
S10	119	S8 and S9	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:29
S11	40833	parallel near5 (ground or road or roadway or street)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:59
S12	11	S8 and S11	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 08:59
S13	249233	oblique or obliquely	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 09:04
S14	37216	("342").CLAS.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/04/14 09:04
S15	116	S4 and S13 and S14	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 09:05

S16	113	S15 not S10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 09:13
S17	18	S8 and S13	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/04/14 09:14

## SEARCH NOTES FOR EAST AND IEEE

SERIAL NUMBER

10505402

EAST: search history attached

Search terms: (auto <or> automotive <or> vehicular <or> (motor vehicle) <or> car <or> traffic) <and> radar <and> (multi-lobe <or> multi-beam <or> multibeam <or> multilobe)

- 1. Eight-channel 77-GHz front-end module with high-performance synthesized signal generator for FM-CW sensor applications** Mayer, W.; Meilchen, M.; Grabherr, W.; Nuchter, P.; Guhl, R.;  
Microwave Theory and Techniques, IEEE Transactions on  
Volume 52, Issue 3, March 2004 Page(s):993 - 1000
- 2. Compact multibeam dual-frequency (24 and 77 GHz) imaging antenna for automotive radars** Schoenlinner, B.; Ebling, J.P.; Kempel, L.C.; Rebeiz, G.M.;  
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- 3. Wide-scan spherical-lens antennas for automotive radars**  
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Microwave Theory and Techniques, IEEE Transactions on  
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- 4. Millimeter-wave folded reflector antennas with high gain, low loss, and low profile**  
Menzel, W.; Pilz, D.; Al-Tikriti, M.;  
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- 5. Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for automotive radar applications in mm-wave**  
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- 6. Multi-beam antenna of short-range navigation system of a car**  
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- 8. Millimeter-wave printed circuit antenna system for automotive applications**  
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- 9. Design of a nonradiative dielectric Rotman lens in the millimeter wave frequency**  
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- 10. A low profile 77 GHz three beam antenna for automotive radar**  
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**11. New conception of the low cost multibeam antennas in the MM-wave regime for radar systems of transport means**

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**12. Multi-beam automotive radar front end using non-contact cylindrical NRD switch**

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**14. Performance analysis and optimization of vehicular spread spectrum radar using multi-beam antenna**

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**15. Vehicular spread spectrum radar using multi-beam antenna**

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**17. Millimeter-wave imaging of traffic scenarios**

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19-20 Sept. 1996 Page(s):327 - 332

**18. Unequally-spaced multiple-beam synthesis for bifunctional radar**

Valle, P.; Naldi, M.; Bardati, F.;

Phased Array Systems and Technology, 1996., IEEE International Symposium on  
15-18 Oct. 1996 Page(s):171 - 176

**19. Congruential frequency hop signals for multi-user environments: a comparative analysis**

Bellegarda, J.R.;

Acoustics, Speech, and Signal Processing, 1990. ICASSP-90., 1990 International  
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3-6 April 1990 Page(s):2903 - 2906 vol.5

**20. Time-frequency properties of extended quadratic congruential frequency hop signals**

Bellegarda, J.R.;

Acoustics, Speech, and Signal Processing, 1989. ICASSP-89., 1989 International  
Conference on  
23-26 May 1989 Page(s):2669 - 2672 vol.4

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Search strategy

No.	Database	Search term	Info added since	Results
1	INZZ	(auto OR automotive OR vehicular OR motor ADJ vehicle OR car OR traffic) AND radar AND (multi-lobe OR multi-beam OR multibeam OR multilobe)	unrestricted	23

Saved: 14-Apr-2005, 16:08:51 CET

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**Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for *automotive radar* applications in mm-wave.**

**Author(s)**

Young-Jin-Park; Herschlein-A; Wiesbeck-W.

**Source**

IEEE Antennas and Propagation Society International Symposium, vol.4, San Antonio, TX, USA, 16–21 June 2002.

In: p.588–91 vol.4, 2002.

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**Design of a multi beam feed using a nonradiative dielectric Rotman lens.**

**Author(s)**

Jae-Gon-Lee; Jeong-Hae-Lee; Heung-Sik-Tae.

**Source**

IEICE-Transactions-on-Communications (Japan), vol.E85-B, no.6, p.1178–84, June 2002. , Published: Inst. Electron. Inf. & Commun. Eng.

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**Wide-scan spherical-lens antennas for *automotive radars*.**

**Author(s)**

Schoenlinner-B; Xidong-Wu; Ebling-J-P; Eleftheriades-G-V; Rebeiz-G-M.

**Source**

IEEE-Transactions-on-Microwave-Theory-and-Techniques (USA), vol.50, no.9, p.2166–75, Sept. 2002. , Published: IEEE.

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**Millimeter-wave folded reflector antennas with high gain, low loss, and low profile.**

**Author(s)**

Menzel-W; Pilz-D; Al-Tikriti-M.

**Source**

IEEE-Antennas-and-Propagation-Magazine (USA), vol.44, no.3, p.24–9, June 2002. , Published: IEEE.

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**Compact *multibeam* imaging antenna for *automotive radars*.**

**Author(s)**

Schoenlinner-B; Rebeiz-G-M.

**Source**

Proceedings of 2002 International Microwave Symposium (MTT 2002), vol.2, Seattle, WA, USA, 2–7 June 2002.

In: p.1373–6 vol.2, 2002.

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**Millimeter-wave printed circuit antenna system for *automotive* applications.**

**Author(s)**

Denisenko-V-V; Shubov-A-G; Majorov-A-V; Egorov-E-N; Kashaev-N-K; Ed. by Sigmon-B.

**Source**

2001 IEEE MTT-S International Microwave Symposium Digest, vol.3, Phoenix, AZ, USA, 20–25 May 2001. In: p.2247–50 vol.3, 2001.

**Compact multibeam dual-frequency (24 and 77 GHz) imaging antenna for automotive radars.**

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**Source**

33rd European Microwave Conference Proceedings, vol.2, Munich, Germany, 7–9 Oct. 2003.  
In: p.785–8 vol.2, 2003.

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**Eight-channel 77-GHz front-end module with high-performance synthesized signal generator for FM-CW sensor applications.**

**Author(s)**

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**Source**

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**Comparison of amplitude-matching and complex monopulse algorithms with respect to SNR.**

**Author(s)**

Kederer-W; Detlefsen-J.

**Source**

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**Multi-beam antenna of short-range navigation system of a car.**

**Author(s)**

Lindvall-A-V; Lindvall-V-R; Shcherbakov-G-I.

**Source**

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Sponsors: FSUE SPO 'Orion'(Moscow, Russia), FSUE 'SCRRTI'(Moscow, Russia), Ukrspetsexport Co.(Kiev, Ukraine), OJS SPE 'Saturn' (Kiev, Ukraine)Interface Co.(Moscow, Russia)SSPE 'Istok' (Fryazino, Russia) SRI of Telecommun. NTUU KPI (Kiev, Ukraine)SSIE 'Orion' (Kiev, Ukraine)SRI of Radiomater. (Belarus)Black Sea Branch of Lomonosov Moscow State Univ. (Sevastopol)Sevastopol Nat. Tech. Univ. (Ukraine) Marine Hydrophysical Inst. NAS Ukraine (Sevastopol)STC 'Omega' (Sevastopol, Ukraine)Nat. Center of Space Vehicles Testing & Controlling (Yevpatoria, Ukraine)Crimean Astrophys. Observatory (Katsiveli, Ukraine)Weber Co. (Sevastopol, Ukraine).  
In: p.567–8, 2002.

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**A low profile 77 GHz three beam antenna for *automotive radar*.**

**Author(s)**

Kolak-F; Eswarappa-C; Ed. by Sigmon-B.

**Source**

2001 IEEE MTT-S International Microwave Symposium Digest, vol.2, Phoenix, AZ, USA, 20–25 May 2001.  
In: p.1107–10 vol.2, 2001.

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**New conception of the low cost *multibeam* antennas in the MM-wave regime for *radar* systems of transport means.**

**Author(s)**

Minin-I-V; Minin-O-V.

**Source**

Gateway to 21st Century Communications Village. VTC 1999–Fall. IEEE VTS 50th *Vehicular* Technology Conference, vol.5, Amsterdam, Netherlands, 19–22 Sept. 1999.  
In: p.3043–6 vol.5, 1999.

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***Multi-beam automotive radar* front end using non-contact cylindrical NRD switch.**

**Author(s)**

Tanizaki-T; Nishida-H; Nishiyama-T; Yamada-H; Sakamoto-K; Ishikawa-Y; Ed. by Meixner-R.

**Source**

1998 IEEE MTT-S International Microwave Symposium Digest (Cat. No.98CH36192), vol.2, Baltimore, MD, USA, 7–12 June 1998.  
In: p.521–4 vol.2, 1998.

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**Performance analysis and optimization of *vehicular* spread spectrum *radar* using *multi-beam* antenna.**

**Author(s)**

Hanada-Y; Kohno-R.

**Source**

Proceedings of Conference on Intelligent Transportation Systems, Boston, MA, USA, 9–12 Nov. 1997.  
In: p.661–6, 1997.

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***Vehicular spread spectrum radar for multiple targets detection using multi-beam antenna.***

***Author(s)***

Hanada-Y; Kohno-R.

***Source***

IEICE-Transactions-on-Fundamentals-of-Electronics-Communications-and-Computer-Sciences (Japan), vol.E80-A, no.12, p.2517-25, Dec. 1997. , Published: Inst. Electron. Inf. & Commun. Eng.

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***Simple design of dual-beam leaky-wave antennas in microstrips.***

***Author(s)***

Luxey-C; Latheurte-J-M.

***Source***

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***Author(s)***

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***Unequally-spaced multiple-beam synthesis for bifunctional radar.***

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***Millimeter-wave imaging of traffic scenarios.***

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Proceedings of Conference on Intelligent Vehicles, Tokyo, Japan, 19-20 Sept. 1996.  
Sponsors: IEEE Ind. Electron. Soc., Assoc. Electron., Technol. Automobile *Traffic* & Driving, IEEE VTS Tokyo Chapter, Int. Assoc. *Traffic* & Safety Sci., Japanese Soc. Artificial IntelligenceMech. Eng. Lab., AIST, MITISeikei UnivSoc. *Automotive* Eng. JapanInst. Electr. Eng. JapanIEICE of JapanInst. Image Electron. Eng. JapanInst. Syst., Control & Inf. EngJapan Soc. Mech. EngRobotics Soc. JapanSoc. Instrum. & Control Eng.  
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**Miniaturized, *multi-beam*, solid-state scanning laser *radar* in automobile collision avoidance sensor systems.**

**Author(s)**

Sargent-R.

**Source**

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**Congruential frequency hop signals for multi-user environments: a comparative analysis.**

**Author(s)**

Bellegarda-J-R.

**Source**

ICASSP 90. 1990 International Conference on Acoustics, Speech and Signal Processing (Cat. No.90CH2847-2), Albuquerque, NM, USA, 3-6 April 1990, p.2903-6 vol.5.

Sponsors: IEEE.

Published: IEEE, New York, NY, USA, 1990, 5 vol. 2970 pp.

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**Time-frequency properties of extended quadratic congruential frequency hop signals.**

**Author(s)**

Bellegarda-J-R.

**Source**

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Published: IEEE, New York, NY, USA, 1989, 4 vol. 2833 pp.

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